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Response to Office Action of 29 June 2005

REMARKS

The applicant thanks the Examiner for the opportunity of an interview in this matter at the Patent Office on 7 June 2005. The content of that interview has been summarized in the Interview Summary Form placed in the record by the Examiner at the time of the interview.

Specification amendments and new matter

The objections to new matter are not repeated and are believed to have been overcome by the previous amendments to the specification.

Claim status

Claims 1, 3, 4, 6, 12, 14 and 29 are pending. Of these, claims 1, 3 and 4 are cancelled. Claims 6 and 12 are amended above in a non-narrowing manner to change their dependency.

A new dependent claim 30 is presented. Support for claim 30 is provided in Figures 7-10, where the radial shoulder delineates head portion 23 from first unthreaded shank portion 26. No new matter is added.

As a result of these amendments, claims 6, 12, 14, 29 and 30 are pending.

Claim rejection - 35 USC §112

The §112 rejection is not repeated and is believed to be overcome.

Rejections under 35 U.S.C. §102(b)

The §102(b) rejection of claims 1, 3, 4, 12, 14 based on Tornier '543 is not repeated and is believed to be overcome.

The Examiner has made two new anticipation rejections, which the applicant will now address.

The first is a rejection of claims 1, 3, 4, 12 and 14 based on US Patent 5,954,722 to Bono ("Bono '722"). Bono '722 has been previously cited, but not previously used as a basis for rejection. These rejections are mooted by the cancellation of claims 1, 3 and 4 and the amendments to claims 12 and 14 that change their dependencies.

The second is a rejection of claim 29, based on US Patent 5.681,311 to Foley ("Foley '311"). Foley '311 is a new reference not previously of record in the case.

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Applicant admits that Foley '311 shows a "system for stabilizing a first bone segment within a bone column relative to a second bone segment in the bone column" as recited in the preamble.

Claim 1 also requires that the bone stabilizing system comprise "a plurality of bone screws, each having a head portion at a first end thereof and a threaded shank portion at a second end thereof, with an unthreaded shank portion therebetween." Figure 7 of Foley '311 shows a bone screw 14 with an "enlarged portion 40" at a first end. Applicant disagrees with the Examiner's identification of the bore 42 (Col. 5, line 5) as the "head portion." The applicant agrees that Foley '311 shows a threaded shank portion, although the applicant would probably identify it in Foley '311 as reference number 36 rather than 38, as reference number 38 seems to apply to the helical thread itself rather than the shank. Col. 4, lines 62-66.

To satisfy the requirement of claim 1 that there is an "unthreaded shank portion" between the head portion and the threaded shank portion, the Examiner identifies reference numbers 40 and 41 of Fig. 7. Applicant respectfully disagrees. Applicant has already indicated that reference number 40 is the head portion and will now indicate that reference number 41 is only the ellipsoid –shaped surface of that head portion 40, as Foley '311 teaches at Col. 5, lines 7-8, where Foley '311 also teaches that this ellipsoidal-shaped surface "interfaces with the cavities 30 of the openings 60, 62." Based on this, the Examiner's position that either 40 or 41 represents "a second portion of the unthreaded shank portion" which "passes through the plate hole and extends into the bone segment when the threaded shank portion is engaged into the bone segment" is not a tenable reading of the teaching of Foley '311. The Examiner is asked to note how the threading shown in Fig 7 of Foley '311, for example, appears to extend axially right up to the head portion 40.

Based on this, it is the applicant's position that Foley '311 not only doesn't show separate first and second unthreaded shank portions between the threaded shank portion and the head portion, but that Foley '311 doesn't even show an unthreaded shank portion. Referring to the "Background of the Invention", the Examiner is reminded that this unthreaded shank portion is important to resolving the prior art problem of screw breakage at the junction of the shank and the head. Foley '311 is, in the applicant's mind,

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only a further example of the prior art that has failed to solve the problem solved by the present invention.

New claim 30 requires that the bone screws have a "radial shoulder" to delineate the head portion from the first unthreaded shank portion. Foley '311 shows nothing of the sort.

Rejection under 35 U.S.C. §103(a)

The Examiner has rejected claim 6 as obvious over a combination of Bono '722 in view of US Patent 6,605,090 to Trieu ("Trieu '090"). This rejected is believed to be mooted by the cancellation of claim 1 and the amendment to claim 6, which changes its dependency from claim 1 to claim 29.

Conclusion

In view of the foregoing amendment and accompanying remarks, the applicant respectfully submits that the present application is properly in condition for allowance. Telephone inquiry to the undersigned in order to clarify or otherwise expedite prosecution of the subject application is respectfully encouraged.

Respectfully submitted,

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